An Evaluation of the Maritime Retention Strategy in Annapolis, Maryland

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EXECUTIVE SUMMARY

- This short-term sudy found that:
- marine business declined significantly during 1990 and 1991;
- this decline resulted from structural changes in the industry as well as a recessionary economy;
- the industry will likely rebound soon, though almost certainly not to levels witnessed during the 1980s;
- the original martime zoning strategy appears well conceived and does not require major revamping at this time;
- there do exist ways for permitting some flexibility that would enhance the viability of the zoning strategy without compromising its overall intent, which may be warranted during recessionary periods.

Background

The City of Annapolis has adopted an aggressive zoning strategy which seeks to preserve the Annapolis waterfront for maritime uses. The program for achieving this was determined through a process which included input from marine businesses, property owners, planners, citizens and others (Maritime Zoning and Economic Strategy, 1986). According to a status report developed by the Annapolis Maritime Advisory Board (April, 1991), the maritime industry peaked in activity in the 1988-1989 period. The following years, 1990 and 1991, have been a period of industry retrenchment, with some landlords having difficulty leasing space and some businesses ceasing to operate.

As a result of this downturn in the maritime industries, some property owners have suggested that the zoning strategy adopted by the City in 1987 is no longer sustainable or viable. They feel that a major change has occurred in the maritime industry that will not be reversed in the foreseeable future. This change, they feel, will lead to continued high vacancy rates and downward pressure on rents to levels near or below the cost of owning and leasing the property. The only sustainable solution they see is some relaxation of the maritime zoning regulations to allow more non-maritime uses.

On the other hand, many business owners and local residents feel that the downturn in the maritime industry is a direct result of the general economic recession being experienced by the national and Maryland economies. As the overall economic picture improves, so too will the maritime industries. The general feeling is that the owners of maritime property are no worse off than owners of non-maritime properties. These individuals feel that the maritime zones are accomplishing what they were created for, and no changes are necessary.

The purpose of this study is to determine to what extent the adoption of special maritime zoning in Annapolis has been successful in retaining maritime businesses there. The challenge is to describe the change in the use of maritime property since the zoning strategy was put into place in 1987. Additionally, we critically analyze some of the assumptions and conclusions drawn from the 1986 Maritime Zoning and Economic Strategy study, and see how these have fared over time.

Changes in the Maritime Business Climate

The United States and Maryland economies are currently in a recession. Following a slowing of economic growth in 1990, the recession officially "began" in 1991. Some analysts believe that the economy will begin to emerge from recession later in 1992 (see Figure 1). One of our tasks is to determine whether the maritime industry in Annapolis is suffering a downturn similar in magnitude and duration to the general economic recession, or whether there has been a major structural change in the maritime industry apart from the overall recession.

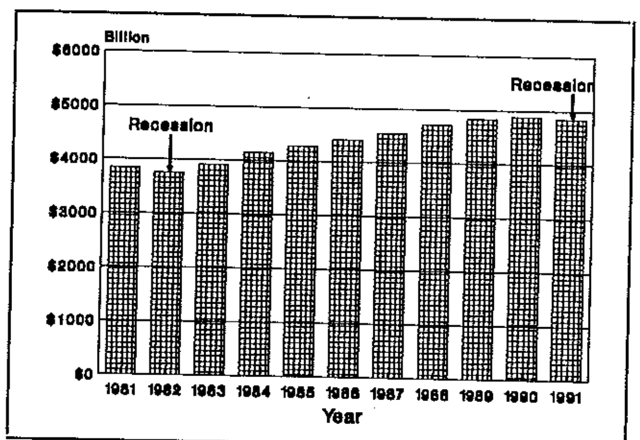

Figure 1. The overall economy has been in a recession since 1991 as measured by real gross domestic product (GDP) in 1987 dollars.

When compared to changes in the Gross Domestic Product (GDP), it can be seen that the downturn in the marine industries occurred earlier and is significantly greater than the overall recession (Figure 2). While it is not surprising that a leisure industry such as recreational boating would suffer a

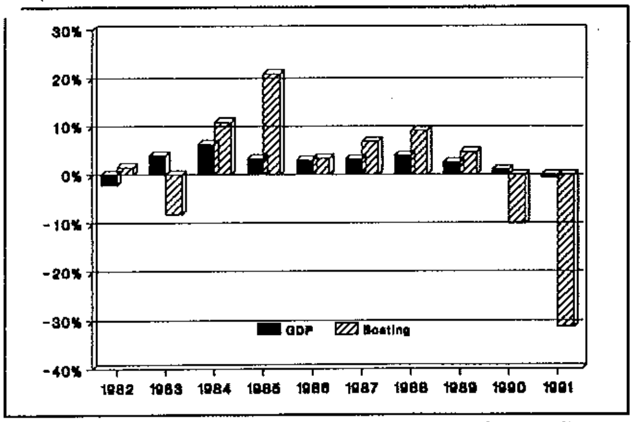

Figure 2. The annual percentage change in retail boating expenditures has fallen dramatically in 1990 and 1991, far outpacing the decline in GDP.

disproportionate amount with the downturn in the economy, the degree to which the marine retail industries have declined can not be explained by the recession alone. In 1991, real (adjusted for inflation) retail expenditures on recreational boating were at their lowest point in twenty years (Figure 3).

The graph of retail expenditures on recreational boating bears a remarkable similarity to

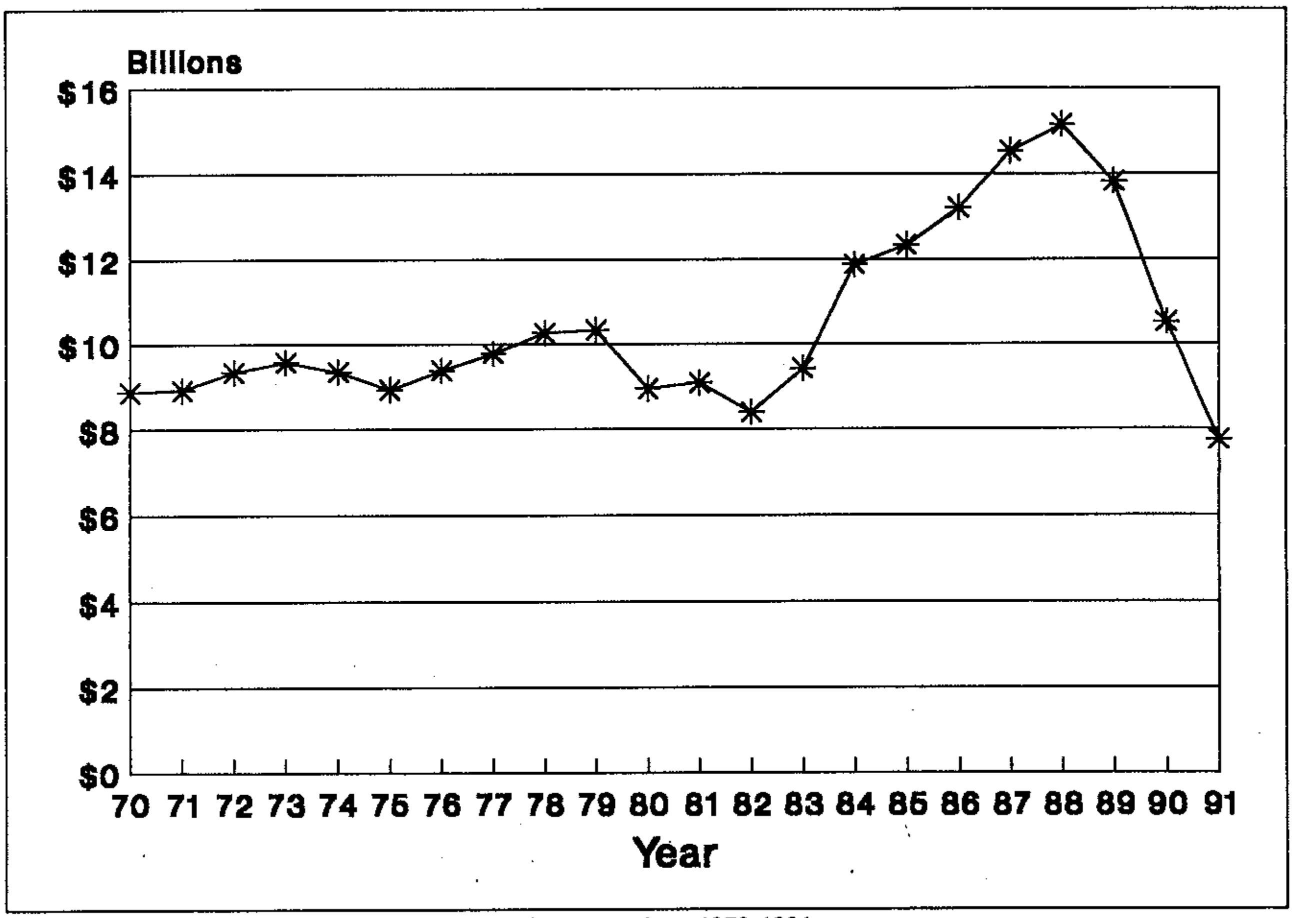

Figure 3. Real retail expenditures on recreational boating, 1970-1991.

the classic product life cycle pattern, where an industry moves in terms of its sales volume from an introductory phase, through a growth phase to a mature phase. The growth phase of an industry is usually spurred by some technological breakthrough or major new market penetration. It is a well known fact that this is what happened in the boating industry in the 1970s and 1980s with the widespread use of fiberglass in boats, and the marketing efforts of several major companies to help penetrate new boating markets. What the product or industry life cycle predicts, however, is that growth does not continue at the same rate. As markets become saturated, sales growth begins to slow to the point where it may even decline.

The current economic recession, along with some other factors such as the luxury tax, has accelerated and exaggerated a slowing of sales in the marine recreational boating industry that would have occurred due solely to the product life cycle phenomenon.[1] What we would expect is that once the gross domestic product begins to grow again, unemployment would decrease, disposable incomes would increase, and boating expenditures would begin to rise. However, short of a major technological breakthrough in boat building or design, or some major structural change in the demand for boating, it would be naive and counter to product life cycle theory to expect industry growth to return to the levels of the 1970s and 1980s. What will drive a renewed growth in the boating industry will be underlying demographic changes in the population that tend to favor growth in boating, in particular, the aging of the

[1]The luxury tax which only applies to vessels costing over $100,000 has been blamed by the industry for much of the decline in sales. However, segments of the industry which produce boats well below the $100,000 price have been hit equally as hard. For example, Brunswick Corporation which is the worlds largest manufacturer of pleasure boats, and whose sales are mainly for boats less than $100,000, has had a decline in sales of 44% since 1988 (Brunswick Corporation, 1991 Annual Report).

baby boom population (Boating Industry, February 1991).

Measures of Boating Activity

One indication of the health of the marine sector in Annapolis would be a measure of the boating activity there. To our knowledge, no such direct measure exists, but there are indicators of activity such as the number of boats homeported in Annapolis. Clearly, the number of boats homeported ignores the component of transient boats, particularly important to a marine center such as Annapolis.

In the April, 1991, report to the Maritime Advisory Board, Table 5 lists the number of boats homeported in Annapolis for 1990. We were unable within the timeframe of this report to obtain a time series from 1987-1991 of this data. We did, however, obtain homeporting information for Anne Arundel County as a whole. This information was presented in Table 3 in the aforementioned report, and we updated it with 1991 data as well as obtained data on changes in other counties that are competing with Annapolis and Anne Arundel County for boating business.

Overall in Maryland, from 1985-1991, there has been a 23% increase in the number of registered and documented boats. This breaks down to a 22% increase in registered boats and a 46% increase in documented vessels. Most of the increase in registered boats has been in the trailerable boat category. Boats not stored on trailers increased only 12% during the period. Over this same period, registered boats homeported in Anne Arundel County increased only 5%, and documented vessels increased 8%, both below the state average. Table 1 lists the counties and their percentage change in registrations and documentations for

COUNTY	REGISTRATION (% Change)	DOCUMENTED (% Change)
Anne Arundel	5	8
Baltimore	9	88
Calvert	-4	48
Cecil	42	60
Kent	33	39
Queen Anne	1	82
St. Marys	-14	77
Talbot	3	50
Worcester	46	184

Table 1. Percentage change in registered and documented boats homeported in Maryland's major boating counties, 1985-1991.

comparison. Only counties with significant boat populations (over 1,000) are included. Note that Worcester County is the location of Maryland's only ocean port, Ocean City.

The good news from the above data is that the boat population in and around Annapolis continues to grow. The main reason growth in Annapolis is slower than the rest of the state and competing areas is that there are few areas in Annapolis where berthing can be profitably added to accommodate the increasing boat population. This is not true in some of the lesser developed areas, where ample land exists for profitable marina development. If Annapolis is to continue to thrive and grow as a boating center, then it must rely on maintaining or increasing transient boat traffic rather than on a growing indigenous boat population.

In addition to the effect of limited additional berthing facilities in Annapolis proper, there are indications that some boaters are selectively choosing to take their boat business out of Annapolis due to congestion on both land and sea. In a recently completed Ph.D. dissertation at the University of Maryland, Swartz found that recreational fishing participation rates may be negatively affected by boat congestion, lack of dock space and boat ramps in the Northern Bay Region.[2] No such problems were found in the Southern Bay Region, where there is less boat congestion.

While many other counties in Maryland are growing faster than Anne Arundel County in boat populations, Anne Arundel is still the dominant boating county in the state. These other areas are growing because there are limited alternatives in and around Annapolis, and because they offer a different type of boating experience -- more rural on land, less congested on the water -- than Annapolis homeported boating does. There is no evidence, however, that these areas are growing at the expense of Annapolis as <u>the</u> boating center for the region.

The "Shopping Center" Concept

One of the major premises in the previous planning study is that Annapolis has evolved into a major shopping center for marine items and services. This shopping center atmosphere, it was proposed, is essential in retaining maritime industries in Annapolis. According to this line of thinking, if the critical mass of businesses falls below that necessary to maintain this shopping center atmosphere, then the viability of all the maritime businesses will suffer.

Regardless of the absolute change in the number of maritime businesses located in

[2] Swartz, David G. A Marine Recreational Fisheries Decision Support System. University of Maryland Ph.D. dissertation, May, 1991.

Annapolis, it would be important to assess if there has been a change in the shopping center status of the city. To test this, we calculated a diversity index for the periods of 1987 and 1991 and compared them to see if there was any significant change. The diversity of the firms would represent the degree to which Annapolis fills its role as a maritime shopping center. To calculate the diversity, we used data supplied by the Marine Trades Association of Maryland (MTAM) on the number and types of firms in Annapolis for the two periods. MTAM has 41 categories by which they classify firms. Firms may list themselves under more than one category. The Shannon diversity index[3] for 1991 was 3.15, and for 1987 was 3.12. This indicates that diversity has actually increased slightly (albeit, insignificantly) in the maritime industries in Annapolis since 1987. Even with the decline in sales at many businesses, and the loss of some businesses, the shopping center character of Annapolis in the marine area remains intact.

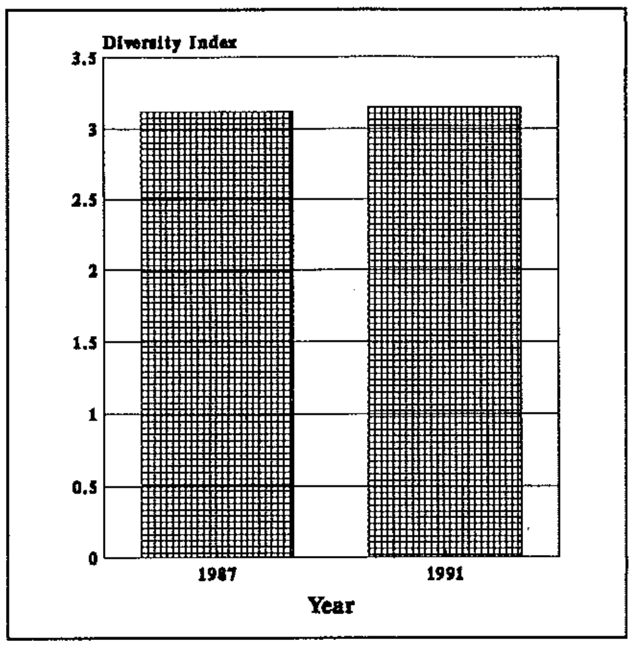

Figure 4. The diversity of Annapolis' maritime businesses that helps provide a maritime "shopping center" has not changed since 1987.

While the concept of "critical mass" for Annapolis as a one-stop shopping area for marine services may remain difficult to prove, it seems obvious that a diverse and well

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[3]This is an index commonly used by ecologists to compare species diversity in different areas or in the same area at different times. It's formula is: $H' = -\sum_i p_i \ln p_i$. Where p_i is the number of observations in industry category i divided by the total number of observations across all industry categories, and ln is the natural logarithm.

integrated array of maritime businesses has created a reputation for the city which can only serve to attract clientele and thus provide a benefit to the whole which is greater than the sum of its parts.

Changes in Annapolis Maritime Businesses Since 1987

One indicator to determine whether the maritime retention strategy is effective is to measure the net entry of maritime businesses since implementation of the zoning strategy in 1987. Net entry is the difference between new businesses and businesses departing. If net entry is negative then more businesses departed Annapolis than arrived. Although net entry can serve as an indicator of success of the zoning strategy, it does not definitively tell us whether the strategy is working. To do this, we would need a predictor of net entry without the zoning strategy, which would require a much more extensive analysis than is included in this study.

To measure net entry we followed the strategy taken in the 1987 Maritime Strategy study and the followup 1991 report to the Maritime Advisory Board. These studies used listings of firms in the Portbook as one measure of the number of maritime firms doing business in Annapolis. The Portbook charges for listings and therefore represents an imperfect self-selected sample; however, we do not foresee any bias in one direction or the other for firms being listed in the Portbook, and therefore judge it to be a reasonable approximation to a random sample. During the course of the study we were supplied a mailing list generated from membership in the Marine Trades Association of Maryland and other sources that is the best attempt to quantify all the marine-related businesses in

Annapolis. Currently, there are 253 businesses on that list. Unfortunately, a complete census was not taken in 1987, so we can not use this information to determine net entry. However it does suggest that the 123 firms listed in the 1991 Portbook represesents a random sample that is 49% of the entire marine-related business population.[4]

Portbooks were obtained for the years 1987-1991 and the firm listings were entered in a database. If a firm appeared in the Portbook in 1987 and did not appear in later years, it was assumed that that firm had exited Annapolis. Firms that appeared in subsequent years were assumed to be new to Annapolis. Although new firms might not advertise in the Portbook immediately, the potential bias this causes should be consistent from year to year and not effect the overall conclusions. Using these criteria we estimated the net entry of marine-related firms in Annapolis for each year from 1987 to 1991. The results are shown in Table 2.

	1988	1989	1990	1991
Entering Firms	31 (22%)	19 (13%)	18 (13%)	20 (16%)
Exiting Firms	25 (18%)	25 (17%)	28 (20%)	25 (20%)
Net Entry	6 (4%)	-6 (-4%)	-10 (-7%)	-5 (-4%)
Number of Firms	144	138	128	123

Table 2. Net entry of marine-related firms in the City of Annapolis since 1987.

[4]Release of the 1992 Portbook is imminent, but we were unable to obtain advanced information on the listing of Annapolis firms.

Based on the Portbook entries, since 1987, 103 marine-related firms have either exited Annapolis or gone out of business altogether. This loss has been partially offset by the entry of 88 new firms into the Annapolis market. The net effect, since the maritime zones have been enacted, is that there has been a net loss of 15 firms since 1987, or 21 firms lost since the peak year of 1988. Since this is only a random sample, one should look at the rates of entry and exit rather than the absolute amounts as indicators of net entry into the Annapolis market. The rates are given as percentages of the previous years number of businesses. For example, in 1988, while the number of new businesses represented a 22% increase over 1987, 18% of the businesses exited, for a net increase of 4%. Over the 1987-1991 study period, we estimate that there has been an 11% decline in marine-related businesses in Annapolis. The annual rate of business loss peaked in 1990 at 7% and has since declined to 4%.

We were unable to determine from the Portbook data which businesses were in the various maritime zones to see if these areas were affected differentially. It would be reasonable to assume that with recent new developments in other areas of Annapolis, outside the maritime zone (e.g., Forest Drive), that businesses located in the maritime zones probably accounted for a smaller share of the business entries, and thus saw a greater rate of business loss than in the city as a whole.

Survey of Maritime Businesses

The 1991 Portbook listing of businesses in Annapolis was also used as the basis for a survey of business owners and operators regarding the effect of the maritime zoning on their business operations. This survey, like the previous analysis, is intended to be a random sample, not a complete census of all marine businesses in Annapolis.[5] A survey form (see Appendix) was mailed to each of the businesses listed in the Portbook. In total, 135 surveys were mailed to marine businesses in Annapolis. Four of the surveys were returned by the Post Office, undeliverable as addressed. Of the remaining 131 surveys, responses were received from 47 businesses. This is an excellent response rate (36%) for a one time mailing of a survey, and indicates the importance of this issue to the Annapolis marine business community.

Description of Sample

Survey respondents represented a broad range of activities and diverse locations within Annapolis. Of the 47 respondents, 27 rented their business space, 17 owned and 3 left the answer blank. Of the 17 property owners, 11 rented space to other tenants. There were 30 respondents located in the maritime zoned districts (Maritime Industrial=13, Mixed Maritime=10, Maritime Eastport=2, Maritime Conservation=1, and unspecified maritime zone=4). Sixteen respondents indicated they were located outside of the maritime zones, and 1 did not know or chose not to respond to the question.

Tenancy

As one might expect, the property owners indicated that they have been present in the

[5]We were contacted by one business owner expressing concern that his business, and others he was aware of did not receive a questionnaire. That particular businesses did not have an opportunity to respond should have no bearing on the survey results if the mailing represents a random sample of the business population.

Annapolis area for a longer period of time than tenants. The average property owner has been in business for 12.4 years compared to 7.2 for tenants. Property owners' time in business ranged from 2 to 33 years, with a median of 10 years.[6] Tenants also had a wide range of time in business from 1 to 26, years with a median of 6 years.

Space Occupied

The median amount of space occupied by both property owners and tenants was similar, 1100 square feet for owners and 1200 square feet for tenants. The smallest space rented by any business was 144 square feet, and the greatest was 10,000 square feet. The minimum space for property owners was also 144 square feet, but the maximum was almost 73,000 square feet of space.

Rents

Rental fees ranged from $1.50 to $48 per square foot per year, and the mean was $11.16. The median may be a better indicator of what rents are in the Annapolis area, and this was measured to be $9.75. The rents reported in our sample include both high quality office space and industrial space. Except for the two extremes of $1.50 and $48 per square foot, rents were in line with office and industrial rents in Anne Arundel County as reported by the Office of Economic Development.[7] Industrial space rents in Anne Arundel County can

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[6]The median indicates that 50% had a number smaller than that indicated and 50% had a number greater. Medians may be a superior measure of central tendency when there are a few very large or very small responses in the sample, but most are grouped somewhere in the middle of the range.

[7]See Anne Arundel County Office & Industrial Space Survey, 1991, Anne Arundel County Office of Economic Development.

be had for as low as $2.95, but the median rent is $6.75. About 32% of our sample, which did not distinguish between industrial and office space, were paying rents below the industrial space median rent for the county. Office space in the Annapolis/Parole area ranges from a low of $10.00 net to $21.00 for full service space, with median rents of $13.00 and $18.50, respectively. Only 14% of the firms sampled were paying rents greater than the median net rent, and only 3% were paying rents greater than the median full service rent. This indicates that the maritime zone has been effective in keeping rents competitive with those in the non-maritime zones and other parts of Anne Arundel County.

Twelve renters indicated that they had compared rents in other areas. Areas mentioned included Kent Island, Deale, Baltimore, Edgewater, Eastern Shore, Solomons, and Anne Arundel County. The vast majority (75%) of the renters indicated that comparable rents were lower in these other areas. The remaining 25% indicated that rents were the same or greater elsewhere. The median response was that rents were 25% lower in these alternative regions. Thus, while it appears that the maritime zone has kept waterfront rents in line with non-waterfront Anne Arundel County rents, comparable space apparently exists in areas outside the county where rents are significantly lower than in Annapolis.

Value of the Annapolis Location

The next two survey questions are an economic contingent valuation experiment. In contingent valuation, respondents are asked to place a dollar value on some hypothetical change in their status. In this case, the renters were asked what the effect would be on their businesses if they were located outside of the Annapolis area. We approached this question in two ways. The first was to ask how much lower rents would have to be for them to consider moving the business out of Annapolis. The second question was more direct and asked how much lower (or higher) their business profits would be if they moved away from Annapolis. Rents and profits are related. With no other changes, lower rents mean greater profits for the marine businesses. The trade-off is that in order to pay lower rents the businesses might have to relocate to an area that would result in decreased sales, and thus, lower profits. The sales volume may be lowered because the firms would no longer benefit from their Annapolis address, whether it is due to the prestige, location in a marine shopping center environment, or referrals from complementary businesses. This explains why rents can be lower in other parts of the state, yet businesses choose toremain in Annapolis.[8]

For the 11 respondents to the contingent valuation questions, they indicated that on average, rents would have to be 41% lower (the median response was 42%) than they are currently paying, to induce them to leave the Annapolis area. This represents an average payment to these firms of $13,400 per year to compensate them for lost profits (or other benefits) as a result of moving from Annapolis. It should be noted that several firms chose not to answer this question, simply stating that they were not interested in moving from Annapolis. It is significant to note that the amount of compensation required by firms to locate outside of Annapolis (a 42% reduction in rent) is greater than the rent difference that these firms found when looking outside the area. From a business point of view, for firms that currently are in Annapolis, the benefits of locating in Annapolis exceed the additional

[8]We recognize that firm location, particularly small firms, may not be driven solely by profit. The business owner may have a desire to work in Annapolis, even though profits might be higher if they located elsewhere. Still, profitability must play a major role in firm location.

costs of doing business there.

Nineteen respondents answered the question as to how moving from Annapolis would affect their companies profits. The average response was that this would result in a 29% decrease in profits (median=-25%). Only 24% stated that moving would have no effect on profits, and none said that it would increase profits. These findings corroborate the basic premise that Annapolis is a unique environment for maritime businesses.

Vacancy Rates

Property owners were asked what their vacancy rates were in 1987 compared to their current vacancy rates. According the owners, they had virtually no vacancies in 1987, when the mean rate was only 1% and the median was 0%. The current situation is markedly different, with a mean vacancy rate of 28% and a median rate of 31%.[9] According to the Anne Arundel County Office of Economic Development, the vacancy rate in the County is 16.3% for both office and industrial space. The vacancy rates of maritime property owners appear to be significantly higher than rates in the county as a whole. This is contrary to the general finding of the City of Annapolis' Department of Planning and Zoning's survey of marine businesses and realtors.[10] Marine businesses and realtors from that survey suggested that maritime property vacancies were probably about the same as non-maritime vacancies in

[9] We were informed by one property owner that since filling out our survey he had leased a substantial portion of his vacant space on a short-term basis with potential for a longer-term arrangement. As a result, the vacancy rates presented below are potentially higher than the immediate rate. However, it would be improper to alter the results based on this unsolicited information unless we were assured that other property owners did not have changes in their vacancy rates since they filled out the survey.

[10] Technical Memorandum from Mary Burkholder to Eileen Fogarty re: Maritime Business Owners' Survey Results, January 13, 1992.

the region.

The Context of the Controversy

Citizens, business owners and others interviewed for this study -- as well as those surveyed by Alderwoman Ellen Moyer in February, 1992 -- expressed a range of opinions about maritime zoning in Annapolis, but the sharpest point of contention has been the issue of preservation versus change. On the one hand some argue that current maritime zoning regulations are unfair, especially at a time (they argue) that marine business is down and marine tenants are scarce or nonexistent. On the other hand, others argue that Annapolis's maritime zoning is accomplishing its task of maintaining a marine-oriented area and should not be changed.

To understand the full extent of this controversy, one should perhaps step back and consider the nature of change which has come to the Annapolis area -- as it has to many other cities and waterfront areas in recent years.

The Character of Change in Annapolis

In addition to a changeable economy, Annapolis and the surrounding area are facing other major shifts. An influx of population has led both to prosperity and to congestion, to opportunity on the one hand and to the loss of continuity with the past on the other. This change has occurred elsewhere in the Baltimore-Washington region, as it has all along the Boston-to-Richmond corridor, but perhaps nowhere with such a sense of loss as in the "Bay Country." Anne Arundel County, like other counties in the region, has seen the addition of new or expanded highways, large areas developed for housing, and an increase in the number of malls and shopping centers, at the expense of forested and agricultural lands. The demise of other natural resource-based industries, such as the oyster industry, has also had a negative effect on traditional lifestyles and a "sense of place."

Regardless of whether one views the current development of land with gratitude or horror, it is clear that there has been an expansion in the suburban business sector. A decade ago, for example, the Parole shopping area stood almost alone as a suburban retail center in the Annapolis vicinity; now shopping centers from Marley Station to the north and Annapolis Harbor Center to the south, including Annapolis Mall and the shopping areas on the Annapolis Neck and Forest Drive, are drawing business from downtown Annapolis. This trend includes marine businesses, such as Boaters World and, more recently, West Marine, both of which have located in the suburban area. Of course other marine businesses, such as Coast Navigation and Glen Housley Sails, have, in the past, moved to the suburbs as well.

In this regard, Annapolis is facing many of the same difficulties confronted by cities throughout the country. Large retail outlets are more easily placed in the suburbs. Parking and heavy traffic are more easily accommodated in the outlying areas, and taxes are generally lower. Ironically, stores such as West Marine, while competing with downtown stores, such as Fawcetts and Viking, will almost certainly benefit from the reputation won by Annapolis as a maritime center. On the positive side, they may also add to the general availability of marine items in the area. Since such marine retail outlets do not specialize in repair, maintenance or construction, they will not, in general, take away customers from boatyards or other service businesses.

In the midst of suburban development and other changes, the City of Annapolis faces a difficult balancing act. While the city, like the county, seeks a viable base for taxes and infrastructure, gathering concerns for a vanishing way of life and a degraded environment have led to laws (including State and Federal laws) which protect the Bay's shoreline, restrict the cutting of trees or attempt to control runoff. And while evaluating its evolving economic relationship with the county and outlying suburbs, the city's major asset arguably continues to be the historic and cultural setting that makes Annapolis unique -- a uniqueness that almost certainly has economic benefits as well as social ones.

The Maritime Debate

What some see as a confrontation between preservation and prosperity has come to a head in the maritime zoning debate. Some citizens interviewed made a plea to retain the maritime character of the city, especially in Eastport. Some even called for a museum-like setting, where one could watch the building or restoration of wooden boats, as in Mystic, Connecticut, for example. Others said that they liked the area "just the way it is," adding that the community had a "love affair" with the marine trades, and enjoyed the presence of boat builders, carpenters, riggers and others connected with the boating industry.

A number of property owners, on the other hand, complained bitterly about obstacles placed in their path. These obstacles were not always related to the maritime zoning issue, or to the City of Annapolis' zoning policy. The property owners in question pointed to such laws and regulations as the critical area law, the tree bill, and occupational safety (OSHA) regulations for the workplace. Their perception was that each year brings more regulation and more expense, making business not only difficult but in some cases impossible.

As an illustration, one property owner planned the building of a marine facility in a designated "marine industrial" (MI) zone. He felt that the City of Annapolis was in fact supportive of his initiative, and according to the owners, Aldermen and others appeared at meetings to testify in his behalf. Still, because of numerous requirements, the project will probably not, according to his most recent projections, get underway.

Specifically, for instance, he was required to design and build a separate structure for spray painting. The air handling system, because of OSHA requirements, cost a significant amount of money. Even so, the paint operation could not be run during the winter, because the air handling system would, according to the owner, draw all of the heat out of the building in short order. Engineers advised him that winter spraying would prove extremely costly, making year-round operation economically infeasible. Without year-round operation, according to the owner, the business could not meet the demands of rents which have been made substantially higher by environmental and occupational safety laws and regulations.

There is clearly a conflict here. It could be distilled, perhaps, into the comments of property owners and the business operators who rent from them. "We are being hamstrung," one owner said. "We are not being allowed to do what we have to do to survive. And at this point I'm not even talking about making money -- I'm just talking about hanging on." A marine business operator, on the other hand, said, "There should be **no** relaxing of the [maritime] zoning regulations whatsoever. The property owners have been able to get exceptions [to zoning rules] as it is -- if the zoning is relaxed, they'll make even more changes."

Interestingly, both property owners and business operators alike conveyed a dissatisfaction with the way Annapolis treats the marine industry. This criticism was not aimed at the Annapolis Planning and Zoning Office, but rather at the city as a whole, and even at the state. Several people commented that Annapolis did not make an attempt to appear "friendly" to transient boaters. They noted in particular the reputation of the Marine Police (Maryland Department of Natural Resources), who evidently are known in at least some quarters for being unnecessarily harsh. One business operator commented that the Marine Police should act more like park rangers, helping people on the water, rather than strictly agents of law enforcement. A property owner, in an entirely separate interview, worried that transient boaters who feel mistreated will return to New England or other parts of the country and spread the word that Annapolis is not a good place for visiting boaters.

One business operator commented that the Annapolis Harbormaster should sit on the city's Marine Advisory Board, since that individual has a great deal of firsthand knowledge about what is happening on the waterfront.

The residents in the area, at least as represented by the Eastport Civic Association, felt that the maritime zoning strategy is working well, that it was derived after a good deal of hard work by representatives of government, property owners, business operators and area residents, and that it should be preserved more or less as is. There was a perception that some landowners had expanded their facilities knowing of the zoning restrictions and should not now be allowed to request an easing of those restrictions.

This attitude seemed somewhat aggravated by the case of the Annapolis City Marina, which, according to one citizen representative, was built on a larger scale than necessary and, more importantly, was slated to accommodate only marine-related business but then shifted to only 60% maritime use. The fear seems to remain that this type of ratcheting downward of zoning restrictions will continue to occur, especially with newly constructed facilities.

Economic Analysis of the Zoning Strategy

The economic arguments for the preservation of working maritime waterfront in the City of Annapolis are implicit in the 1986 Planning Study. Having working maritime waterfront makes Annapolis a unique city, and this uniqueness is a "public good." A public good exists when individuals benefit from something, but it is difficult to make them pay (usually, because those who do not pay cannot be excluded from enjoyment of the benefit). In this case there are several groups who benefit from Annapolis' unique character, including residents, property owners and the maritime-related businesses themselves. Left to the free market transaction of waterfront property, this public good nature is not considered, and the highest and best use from a purely financial standpoint is conversion of the property to its highest net income -- as opposed to highest net social benefit -- producing uses (e.g., condominiums, hotels, etc.). From the public welfare point of view, the highest and best use would consider the value of the public good, and would require public sector intervention (e.g., zoning, taxes or subsidies) to maintain these uses.

The value of the unique maritime community in Annapolis is potentially measurable with in-depth economic studies, but such an analysis is beyond the scope of this report. It is our impression that it is widely accepted among citizens, business and property owners that the value of preserving the maritime character of Annapolis' waterfront businesses exceeds the foregone financial benefits from allowing a fundamental change in the makeup of the waterfront community towards non-maritime related businesses. This assumption, at least for those in maritime businesses, is somewhat substantiated by the contingent valuation experiment conducted in our survey of marine businesses. Therefore, we accept as a given the correctness of the maritime retention strategy from an economic efficiency argument.[11]

The economic issue we would like to explore is the effectiveness of zoning in achieving the maritime retention goal, and how it impacts the market for property in the maritime zones. The maritime zones, by dictum, reduce the demand for sale or rental of property in that zone, by eliminating classes of potential renters or buyers from the marketplace. We will use the rental argument to make our point.

The willingness to pay a certain level of rent for office or industrial space (rental demand) is a function of how a particular space will effect the profits of the business. The higher the profits at a particular location, the greater the rent the business owner is willing to pay. Economists call this kind of demand a "derived" demand, because it is derived from business profits. We demonstrated in our contingent valuation experiment that business owners are willing to pay higher rents if this in turn translates into higher firm profits. This derived demand is depicted in a supply and demand diagram of the Annapolis maritime real estate market (Figure 5).

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[11]The reader is referred to an excellent 3 volume compendium on this issue: North Atlantic Water Dependent Use Study, Vol I. Managing the Shoreline for Water Dependent Uses A Handbook of Legal Tools, Vol II. Guidebook to the Economics of Waterfront Planning and Water Dependent Uses, Vol III. An Executive Summary. Marine Law Institute, University of Maine School of Law, Portland, ME, 1988.

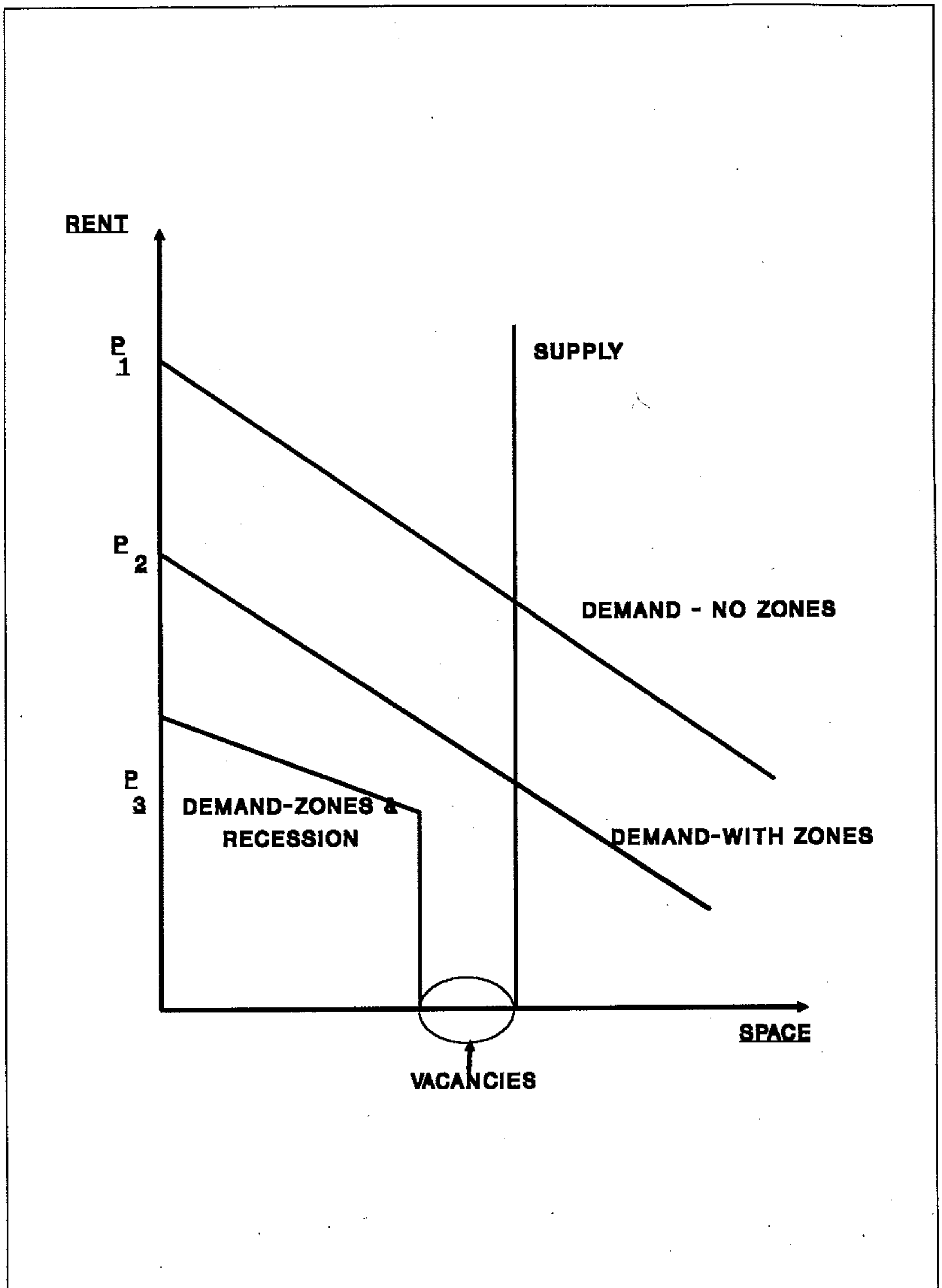

Figure 5. Market diagram showing how the maritime zones and a marine industry recession lowers the demand for rental property in the maritime zone.

The quantity of maritime real estate available for rent is relatively fixed in the short run and mostly independent of real estate prices. If property owners can at least break even on property rentals, then the availability of rental space in the short run will not change. In the long run, if rental prices are extremely high, new properties will be developed to capture more of the potential market. This situation is depicted as the vertical real estate supply curve in Figure 5. Without the maritime zone, the real estate market clears (is in equilibrium) at a higher price (p_1) than when there is a maritime zone in place. The zoning acts to remove a portion of potential renters out of the market, those that do not meet the requirements of the maritime zone. This removal is represented by a shift downward in the demand curve for rental property. The new market situation with the maritime zone is one where the same quantity of property is leased, but the rental rates are lower (p_2). In effect, the zone is a forced subsidy of maritime property owners from maritime businesses. The issue is whether or not the subsidy is sufficient to retain maritime businesses and attract new ones, thus achieving the goals of the zoning.

When the maritime zones were put into effect, the marine trades were a booming industry. Assumptions were made in the 1986 Maritime Retention Strategy report that the maritime industry was healthy and would continue to grow. With a strong demand by maritime businesses due to the profitability of this industry segment, the viability of the maritime zone was never questioned. Most of the discussion in that report discussed compensation for property owners for the forced benefit transfer to businesses (e.g., lower tax assessments).

Under current conditions where profits have been greatly diminished due to the unprecedented decline in marine-related expenditures, the issue of whether the subsidy is sufficient becomes problematic. Without the higher profits, fewer businesses can afford to pay the rents, and the demand curve shifts even lower. The high vacancy rates and the loss of maritime firms in Annapolis indicate that there is currently an excess supply of maritime space in Annapolis. This, in economic terms, is what has created the discussion about reexamining the maritime zones in Annapolis.

Summary and Recommendations

This analysis has attempted to provide objective information on the state of maritime industries in Annapolis since the maritime zones became effective in 1987. In our discussions and interviews we have found that people on different sides of this issue have very different subjective opinions about the status of the industry, usually based on a biased sampling or discussions with a few individuals. The most commonly held belief is that since the overall U.S. economy is in a recession, the loss of marine businesses in Annapolis, the slowdown in sales of existing businesses and the vacancies in the maritime zones are simply a reflection of this recession. It was often stated to us and others that the maritime businesses and property owners were no worse off than other kinds of businesses and property owners.

We have shown in our analysis that the downturn in marine-related industries is much more severe and prolonged than the recession in the general economy. The urging of property owners to renew discussions about the maritime zones should not be dismissed as simply an opportunistic attempt to use the recession as a wedge to squeeze more income out of their properties. Their concern about the viability of the maritime zones deserves to be considered.

On the other hand, throughout our discussions and analysis with civic leaders, property owners and business owners, there has been overwhelming support for the maritime retention concept. We have also suggested in this report that the public and private benefits from the maritime center maintained through the retention strategy may well exceed the costs of not allowing alternative development such as hotels and condominiums. Therefore, any major change in the maritime zone, for example, to allow significantly more non-maritime businesses would not be in the best interest of the Annapolis community. The focus necessarily must fall on how to make the maritime zone viable, even in recessionary times.

There are primarily two ways the City has of ensuring the viability of the maritime zone. One is to actively encourage marine-related businesses through aggressive incentive programs. Another is a carefully controlled increase in the flexibility of the zoning regulations that increases the market pool of potential business tenants in times when it is warranted.

The first option for encouraging maritime business was clearly preferred by citizen representatives and other proponents of the maritime zoning strategy. This active recruitment could include the use of a business incubator, low interest loans, subsidies, and aggressive promotion of Annapolis as an attractive location for marine-related industries. The biggest problem facing small firms and new start-up companies is access to capital. Low interest loans or loan guaranty programs targeted at maritime businesses would create a significant subsidy to attract qualifying businesses to the maritime zones. Business incubators have apparently been raised in passing as a potential aid in attracting maritime businesses. Their effect is to lower the start-up costs for companies, and are another way of overcoming the access to capital problem. Any of these programs provide financial incentives for businesses to locate in Annapolis by helping to offset some of the perceived and real difficulties of doing business there.

Generally, landowners are seeking some form of the second alternative -- increased flexibility in the zoning laws -- though none held that they were opposed to the general intent or structure of those laws.

One question concerns how some flexibility could be built into the maritime zoning strategy, without a major retreat from the plan. For example, given that the strategy was devised during a "boom" period, should there be a method for dealing with recessionary periods? Here is a scenario, offered primarily for the purpose of illustration:[12]

The City could devise an index based on leading economic indicators which would set into motion a "recession strategy." During such times, the City could relax the restriction on nonmaritime use, say up to 20 percentage points. If a landlord could document that he or she had made a good faith effort to recruit maritime tenants (through newspaper advertising, etc.) and could demonstrate that rents were in line with comparable spaces in the area, then the City could allow non-marine tenants in that flexible percentage.

This flexibility would disappear once the economic index changed. And while the renters could remain in that same space, once a tenant anywhere in the property moved, the landlord would have an obligation to find a marine tenant, and would fall under the same

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[12]The exact details of such a strategy would be worked out and negotiated through the normal regulatory process. These details would include: which economic indicators to use, what constitutes proof of effort to rent to maritime, percentage allowed for non-maritime, etc.

restrictions as before.

Such a "flexible margin" would allow short-term flexibility to help keep landowners in business during recessionary times but would not change the long-term character of the zoning strategy.

Another area of flexibility that should be considered is how the calculation of second story and higher floor space factors in. Since second-story space does not have direct access to the water, perhaps greater flexibility can be afforded to the use of this space towards uses that are complimentary to maritime businesses. These uses could potentially cross-subsidize ground-level direct maritime uses. Differential consideration of second story space could be used in conjunction with the previous recommendation about building in recessionary flexibility, or it can be put into place as a permanent change to the regulations.

Essential to this process, however, is a sense of trust between the City, the residents, the business owners and the property owners -- something which is not always easy to maintain. A flexible policy of review and modification, for example, would only be accepted by proponents of specialized zoning (in this case, maritime zoning) if they felt that the City would not allow such flexibility to thwart the goals of the zoning.

One way to encourage compliance with the intent of the maritime zoning regulations, especially under the proposed flexible scenario, would be to remove some of the incentive for owners to lease property to non-maritime at higher rates when there are availabe maritime businesses willing to pay slightly lower rents. A means of taxing away some of the higher rents, through temporary higher assessments, or a set tax on non-maritime would remove some of this incentive. The precedent of such a tax differential has already been established with the slip tax, which ironically provides a disincentive for maritime use of a parcel of property as compared to a non-maritime use.

Conclusions

Our current analysis leads us to believe that the City has made a good faith effort to adhere to the goals of specialized zoning in the maritime area, and we recommend no major overhaul of the zoning concept. If some degree of flexibility seemed desirable, during recessionary periods, for example, the City could consider a slight increase of up to twenty percentage points for non-maritime use in some locations, as long as all parties remain committed to the general goals of the zoning effort. There may be a balance required to navigate between the rapid change affecting the entire region and its economy and the desire to maintain a valuable and attractive part of the waterfront's character. Rather than thwarting the zoning effort, some degree of flexibility could help the City in its attempts to retain maritime business in Annapolis.

The City of Annapolis, until recently, has had a rather painless route in attempting to preserve its maritime identity. The decade of the 1980s was a boom time for maritime-related industries. The adoption of maritime zones at the peak of this boom was financed by high business profits and high waterfront land values that resulted from the boom. In just 3 years, the U.S. marine industries have lost all the sales gains they made over the past 20 years. Although Annapolis has lost some marine businesses during this time, it has managed to hold its own as a major marine center. As marginally profitable businesses closed down, the well-run ones have managed to stay in business, and a few have actually increased sales despite an overall business decline. Partly because of the existence of Annapolis as a marine shopping center, many of the businesses here have continued on. Although we feel the marine industries are poised for a healthy recovery, we do not anticipate a return to the boom years of the 1980s. In the absence of a boom in the maritime industries, the City must evaluate how zoning restrictions can be supplemented with other incentives in order to retain and attract maritime businesses. One of the major tenants of economics is that there are no free lunches. If Annapolis wants to retain its maritime character, it will be costly, but in the view of those who care about the city's cultural heritage, it will probably be worth it.

APPENDIX

March 3, 1992

Dear Maritime Business Owner:

The University of Maryland Sea Grant Program and Coastal and Environmental Policy Program are conducting an evaluation of the City of Annapolis' Maritime Retention Strategy. The strategy, adopted in 1987, established special maritime zones in order to retain specific types of maritime activities in those zones. The Department of Planning and Zoning would like to know how well the zoning strategy is working, and whether modifications to the zoning strategy are needed.

We seek your assistance by providing us responses to the questions on the attached questionnaire. The information you provide will remain confidential and only be released in aggregate form. Your participation is essential to enable us to provide the City with accurate information about the effectiveness of their policies. Please take the few minutes necessary to answer the questions carefully and return your survey in the enclosed stamped envelope. Thank you in advance for your cooperation.

Thank you,

Doug Lipton
Marine Economic Specialist, Maryland
Sea Grant Program

Jack Greer
Director, Coastal and Environmental
Policy Program

ANNAPOLIS MARITIME RETENTION STRATEGY QUESTIONNAIRE

1. Is your business located in one of the designated maritime zones (see enclosed map)?
_____ yes (MC MM MI ME) circle one ______ no

2. How many years has your business been at this location?
_____ years

3. How many square feet does your business occupy at this location?
__________ square feet

4. Do you own or rent your business space?
_____ own (**please skip to question 10**) _______ rent

5. What is your annual rent per square foot?
$__________ per square foot per year

6. Have you compared the cost of ownership or rental space outside the Annapolis area?
______ yes (where? _________________) ______ no

If the answer to question 6 was no, skip to question 8

7. What is the difference in rental or ownership costs for equivalent property outside the Annapolis area?
_____ % higher or ______% lower or ________ about the same

8. What absolute difference in rents would induce you to seriously consider moving from Annapolis to another location? If rents were $____ per square foot lower elsewhere, I would consider relocating.

9. What would the effect be on your profits if you moved your business away from the immediate Annapolis area?
_____ % higher or ______% lower or ________ about the same

10. Please rank (from 1 to 5) the factors that make locating your business in Annapolis appealing:
    a. ___ Prestige of Annapolis address (1=lowest, 5=highest)
    b. ___ Proximity to complementary businesses
    c. ___ Annapolis as a major boating center
    d. ___ Quality of labor supply
    e. ___ Other (List) ____

11. Please rank (from 1 to 5) the following factors in terms of the negative aspects of locating your business in Annapolis:
    a. ___ High cost area (1=lowest, 5=highest)
    b. ___ Boating congestion
    c. ___ Parking and traffic congestion
    d. ___ Proximity to competing businesses
    e. ___ Other (List) ____

12. Do you rent property to other businesses in the maritime zone?
    ____ no ____ yes

13. If the answer to 12 is yes:
    a. Number of square feet rented or vacant ________square feet.
    b. Current vacancy rate _____% c. Vacancy rate in 1987 _____%

14. Please feel free to make additional comments on the maritime zoning issue on a separate sheet.

**Thank you. Please return to Maryland Sea Grant, University of Maryland, Room 1123, Taliaferro Hall, College Park, MD 20742.
A self-addressed stamped envelope has been provided.**

Survey # _______